

FORM PTO 1999 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use several sheets if necessary)

ATTY. DOCKET NO. 1341-3	SERIAL NO. 10/797,747
APPLICANT Long, et al.	CONFIRMATION NO. 3427
FILING DATE March 10, 2004	GROUP .

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
GY	2002/0037 312 A1	03/28/02	Brown et al.			
	2003/0175 332A1	09/18/03	Brown et al.	·		

EXAMINER INITIAL	DOCUMENT · NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
GY	3,194,732	07/13/65	Neuhauser			
	4,141,973	02/27/79	Balazs			
	4,517,295	05/14/85	Bracke et al.			
	4,713,448	12/15/87	Balazs et al.			
	4,716,224	12/29/87	Sakural et al.			
	4,784,990	11/15/88	Nimrod et al.			
	4,879,375	11/07/89	Cullis-Hill			
	4,992,264	02/12/91	Diot et al.			
	5,079,236	01/07/92	Drizen et al.			
	5,099,013	03/24/92	Balazs et al.			
	5,141,964	08/25/92	Noel	·		
	5,166,331	11/24/92	Della Valle et al.			
	5,316,926	05/31/94	Brown et al.	-		
J	5,411,874	05/02/95	Ellwood et al.			

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FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE (Rev. 2-32) PATENT AND TRADEMARK OFFICE

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March 10, 2004	1617

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
GY	5,415,875	05/16/95	Kakoki et al.			
	5,538,740	07/23/96	Abad			
	5,460,832	10/24/95	Yamaguchi et al.			
	5,559,104	09/24/96	Romeo et al.			
	5,646,129	07/08/97	Callegaro et al.	ļ		
	5,783,691	07/21/98	Malson et al.	<u> </u>		
	5,925,626	07/20/99	Della Valle et al.			
	5,869,063	02/09/99	Lezdey et al.	ļ		
	5,928,659	07/27/99	Моу			
	6,030,958	02/29/00	Burns et al.		ļ <u></u> -	
	6.090,596	07/18/00	Stahl			
	6,194,392 B1	02/27/01	Falk et al.	ļ		
	6,217,913 B1	04/17/01	Mohammadi			
	6,218,373 B1	04/17/01	Falk et al.			
	6,255,295 B1	07/03/01	Henderson et al.			-
	6,337,389 B1	01/08/02	Wolfinbarger, Jr.			:
	6,399,083 B1	06/04/02	Pillai et al.			
4	6,498,204 B1	12/24/02	Ubara -			

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GV		JP1043502	02/15/89	Japan					
G		Dupoir	ranes," <i>Poult So</i>	Ozimek., "Che ci. 2003, 82(3):: uier D., Picot M d bone regenera bstract].	10-4 (Abs	tract]. M., "Compa	rative st	udy of three d	ifferent
		2001, 1	30(1):58-62 [A	d bone regenera bstract]. J., Panheleux M sozyme as a cor	1., Garcia-I	Ruiz J., McI	Kee MD,	Nys Y., "Ide	ntification
	<u> </u>	Matrix	Biol 2000, 19((5):443-53 [Abs	tract].				
		fillers	used in combin	M., Pourquier ation with guid , 58(1):40-6 [A	ed bone reg	arison of pegeneration:	ericranium an exper	m and eggshe imental study	ll as space ," J Oral
		X coll:	JL, Nakamura (agen on experir 36(1):21-33.	O, Fernandez M mental minerali	S, Wu JJ, I zation of eg	Knigge P, E	yre DR, nbranes,	Caplan Al, "I ' Connect Tiss	Role of type sue Res
		Arias .	JL, Fernandez I rane," Connect	MS, Dennis JE, Tissue Res 199	Caplan Al,	"Collagens	s of the c	hicken eggsh	ell

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form

244(2):481-3.

with next communication with applicant.

protein," Connect Tissue Res 1980, 8(1):53-5 [Abstract].

Starcher BC, King GS, "The presence of desmosine and isodesmosine in eggshell membrane

Osuoji CI, "Acid glycosaminoglycan of eggshell membranes," Biochim Biophys Acta 1971,

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FORM PTO- (Rev. 2-32)		DEPARTMENT OF COMMERCE AND TRADEMARK OFFICE	ATTY. DOCKET NO. 1341-3	SERIAL NO. 10/797,747
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•	OTHE	R DOCUMENTS (Including Aut	hor, Title, Date, Pertinent	Pages, Etc.)
GY		Gautron J, Hincke MT, Panheleux a matrix protein of the hen eggshe Res 2001, 42(4):255-67 [Abstract	ell membranes and basal calcif	e T, Nys Y, "Ovotransferrin Ted layer," Connect Tissue
		Akagawa M, Wako Y, Suyama K membrane," <i>Biochim Biophys Act</i>	, "Lysyl oxidase coupled with ta 1999, 1434(1):151-60 [Abst	catalase in egg shell ract].
		Suyama K, Fukazawa Y, Umetsu eliminate heavy metal ion from th 45-46:871-9[Abstract].	Y, "A new biomaterial, hen en e	gg shell membrane, to ol Biochem Biotechnol 1994,
		Arias JL, Fernandez MS, Dennis substructure of the eggshell mem [11(5):313-20[Abstract].	JE, Caplan AL, "The fabricati brane in the isthmus of the her	on and collagenous n oviduct," <i>Matrix</i> 1991,
		U.S. Department of Agriculture, "Levels of calcium and soluble co	ollagen in turkey egg shell me	Beltsville, Maryland 20705 mbranes," Comp Biochem
		Leach RM Jr, Rucker RB, Van D desmosine/isodesmosine-contain 9[Abstract].	yke GP, "Egg shell membrane ing protein," <i>Arch Biochem Bi</i>	protein: a nonelastin ophys 1981, 207(2):353-
		Crombie G, Snider R, Faris B, Fr membrane," Biochim Biophys Ac	ranzblau C, "Lysine-derived cr eta 1981, 640(1):365-7[Abstrac	ross-links in the egg shell ct].
		Harris ED, Blount JE, Leach RM implications in egg shell membra	I., "Localization of lysyl oxi ne formation and composition	dase in hen oviduct: ," <i>Science</i> 1980,

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Biochim Biophys Acta 1973, 320(2):427-41[Abstract].

208(4439):55-6[Abstract].

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication with applicant.

Stevenson IL, "The removal of egg shell membranes by enzyme treatment to facilitate the

Picard J, Paul-Gardais A, Vedel M., "[Sulfated glycoproteins from egg shell membranes and hen oviduct. Isolation and characterization of sulfated glycopeptides (author's transl)],"

study of shell microstructure," Poult Sci 1980, 59(8):1959-60[Abstract].

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ļ	OTHER I	DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
GY		Robinson DS, King NR, "Mucopolysaccharides of an avian egg shell membrane," JR Microsc Soc 1968, 88(1):13-22[Abstract].
		Powrie William, Nakai S., "The Chemistry of eggs and egg products," Egg Science and Technology 1990, 97-139.
		Wu Tzong-Ming, Rodriguez Juan Pablo, Fink David, Carrino David, Blackwell John, Caplan Arnold, Heuer Arthur, "Crystallization Studies on Avian Eggshell Membranes: Implications for the Molecular Factors Controlling Eggshell Formation," <i>Matrix Biology</i> 1995, 14:507-513.
		Wong Mitchell, Hendrix Mary J.C., Mark Klaus von der, Little Charles, Stern Robert, "Collagen in the Egg Shell Membrane of the Hen," Developmental Biology 1984 104:8-36.
		Gautron, Bain M., Solomon S, NYS Y., "Soluble matrix of hen's eggshell extracts changes in vitro the rate of calcium carbonate precipitation and crystal morphology," British Poultry Science 1996 37, 853-866.
		Tomihata Kenji, Ikada Yoshito, "Crosslinking of hyaluronic acid with water-soluble carbodiimide," J Biomed Mater Res, 1997, 37, 243-251.
		Carrino David, Dennis James, Wu Tzong-Ming, Arias Jose, Fernandez Maria, Rodriguez Juan, Fink David, Heuer Arthur, Caplan Arnold, "The Avian Eggshell Extracellular Matrix as a Model for Biomineralization," Connective Tissue Research, 1996, 35(1-4), 325-329.
J		Hincke M.T., Tsang C.P.W., Courtney M, Hill V, Narbaitz R., "Purification and Immunochemistry of a Soluble Matrix Protein of the Chicken Eggshell," <i>Calcif Tissue Int</i> , 1995, 56:578-583.

EXAMINER CONSIDERED DATE CONSIDERED

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GY	<u> </u>	·	Baker, J.R. et al., "A Study of the Journal, 1962, 82, 352-361.	Organic Material of Hen's-Eg	gg Shell", Biochemical
			"Egg Science and Technology", E a subsidiary of The Haworth Pres	ds. W.J. Stadelman and O.J. (s, Bingham, NY, 1990.	Cotterill, Food Products Pres
			Britton, W.M. and Hale, K.K., "A Young and Old Hens Varying in S	mino Acid Analysis of Shell Shell Quality'', <i>Poultry Scienc</i>	Membranes of Eggs from e, 56:865-871, 1977.
			Cifonelli, J.A., "The Colormetric Tissue Research, ED:DA Hall, Jo 256.	Estimation of Uronic Acid", Nynson-Bruvvers Ltd., Oxford,	Methodology of Connective 1976, Chapter 26, pp. 253-
			Armstrong, DC and Johns, MR, " Hyaluronic Acid by Size Exclusion	Improved Molecular Weight A on Chromatography" in Biotec	Analysis of Streptococcal chnology Techniques.
			Fernandez, M.S., Araya, M., and Temporal Arrangement of Sequen 1997.	Arias, JL, "Eggshells are Shap ntially Deposited Macromolec	ped by a Precise Spatio- rules", Matrix. Biol., 16:13-20
			Takahashi, K., Shirai, K., Kitamu as a Regulating Material for Colla Biochemistry, 60:1299-1302, 199	agen Matrix Reconstruction",	Egg Shell Membrane Protein Biosci. Biotechnology &
			T.C. Laurent, "Structure of Hyalu Vol. 2, 1970, pp. 703-732.	ronic Acid", Chem. and Mol.	Biol. of Intracellular Matrix

DATE CONSIDERED **EXAMINER**

Biological Chemistry, Vol. 193 (1951) pp. 265-275.

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Physiological Reviews, Vol. 58, No. 1 (1978) pp. 255-315.

O.H. Lowry et al., "Protein Measurement with the Folin Phenol Reagent", The Journal of

W.D. Comper et al., "Physiological Function of Connective Tissue Polysaccharides"

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CONFIRMATION NO.

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	ОТНЕ	R DOCUMI	ENTS (Includ	ing Author,	Title, Date, Pert	inent Pages	, Etc.)
GY		K. Mey	er, "Chemical St	ructure of Hy	aluronic Acid", Fed.	Proceed, Vo	l. 17 (1958) pp. 1075
		E.A. Ba	lazs et al., "Hya robl. Ophthal., V	lluronic Acid : /ol. 10 (1972)	and Replacement of pp. 3-21.	Vitreous and	Aqueous Humor"
		U.B.G. (1983) ₁	Laurent, "Hyalu pp. 129-130., Vo	ronate in Hum l. 101 (1983)	nan Aqueous Humor pp. 129-130.	", Arch Ophi	almol., Vol. 101
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